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DATE MAILED: 04/05/2005

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,271	11/28/2000	Ernst Eberlein	40999	3541
7590 04/05/2005			EXAMINER	
John E Holmes			BAYARD, EMMANUEL	
Roylance Abrar	ns Berdo & Goodman			
Suite 600			ART UNIT	PAPER NUMBER
1300 19th Street NW			2631	
Washington D	C 20036			

Please find below and/or attached an Office communication concerning this application or proceeding.

	4						
	Application No.	Applicant(s)					
5-2-	09/673,271	EBERLEIN ET AL.					
Office Action Summary	Examiner	Art Unit					
	Emmanuel Bayard	2631					
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the	correspondence address					
A SHORTENED STATUTORY PERIOD FOR REPL	Y IS SET TO EXPIRE 3 MONTI	H(S) FROM					
THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be y within the statutory minimum of thirty (30) d will apply and will expire SIX (6) MONTHS fro , cause the application to become ABANDO	timely filed lays will be considered timely. om the mailing date of this communication. NED (35 U.S.C. § 133).					
Status ·							
1)⊠ Responsive to communication(s) filed on <u>14 Ja</u>	anuary 2005.						
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· <u> </u>	, _						
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims							
4) Claim(s) 47-92 is/are pending in the application	n.						
4a) Of the above claim(s) is/are withdraw	4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.	Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>47-54 and 70-77</u> is/are rejected.	Claim(s) 47-54 and 70-77 is/are rejected.						
7)⊠ Claim(s) <u>55-69 and 78-92</u> is/are objected to.	Claim(s) <u>55-69 and 78-92</u> is/are objected to.						
8) Claim(s) are subject to restriction and/o	B) Claim(s) are subject to restriction and/or election requirement.						
Application Papers							
9)☐ The specification is objected to by the Examine	er.						
10) The drawing(s) filed on is/are: a) acc	epted or b)□ objected to by the	e Examiner.					
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).							
11) The oath or declaration is objected to by the Ex	caminer. Note the attached Office	ce Action or form PTO-152.					
Priority under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document: 2. Certified copies of the priority document: 3. Copies of the certified copies of the priori	s have been received. s have been received in Applica rity documents have been recei	ation No					
application from the International Bureau * See the attached detailed Office action for a list	· · · · · · · · · · · · · · · · · · ·	ved.					
Attachment(s)							
Notice of References Cited (PTO-892)	4) Interview Summa						
 Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 	Paper No(s)/Mail 5) Notice of Informal 6) Other:	Date Patent Application (PTO-152)					
							

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DETAILED ACTION

This is in response to RCE filed on 1/14/05 in which claims 47-92 are pending.

Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 2. Claims 47-54, 70-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 3. Claim 47 recites the limitation "the envelope of the amplitude modulated" in line 5. There is insufficient antecedent basis for this limitation in the claim.
- 4. Claim 47 recites the limitation "the reference pattern" in line 6. There is insufficient antecedent basis for this limitation in the claim.
- 5. Claim 50 recites the limitation "the envelope of the amplitude modulated" in line 12. There is insufficient antecedent basis for this limitation in the claim.
- 6. Claim 50 recites the limitation "the reference pattern" in line 13. There is insufficient antecedent basis for this limitation in the claim.
- 7. Claim 54 recites the limitation "the multi-carrier signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.
- 8. Claim 70 recites the limitation "the envelope of the amplitude" in line 6.

 There is insufficient antecedent basis for this limitation in the claim.
- 9. Claim 70 recites the limitation "the reference pattern" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

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10. Claim 73 recites the limitation "the envelope of the amplitude" in line 13.

There is insufficient antecedent basis for this limitation in the claim.

11. Claim 73 recites the limitation "the reference pattern" in lines 13-14.

There is insufficient antecedent basis for this limitation in the claim.

12. Claim 75 recites the limitation "said means for generating said reference

symbol" in lines 1-2. There is insufficient antecedent basis for this limitation in

the claim.

13. Claim 76 recites the limitation "said means for generating said reference

symbol" in lines 1-2. There is insufficient antecedent basis for this limitation in

the claim.

14. Claim 77 recites the limitation "the multi-carrier" in line 3. There is

insufficient antecedent basis for this limitation in the claim.

Claim 74 is likewise rejected because it depends on a base rejected

claim.

Claim Objections

15. Claim 55 is objected to because of the following informalities: in page 5,

line 1 of the response, replace "the" before signal with -a--. Appropriate

correction is required.

16. Claim 61 is objected to because of the following informalities: in line 13,

replace "the" before signal with -a--. Appropriate correction is required.

17. Claim 78 is objected to because of the following informalities: in line 10,

delete "the" before time. Appropriate correction is required.

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18. Claim 78 is objected to because of the following informalities: in line 13, replace "the" before signal with –a--. Appropriate correction is required.

19. Claim 84 objected to because of the following informalities: In page 13, line 3, replace "the" before signal with -a--. Appropriate correction is required.

Claims 79-83 and 85-92 are likewise objected because they depend on a base objected claim.

Allowable Subject Matter

- 20. Claims 47, 50, 70 and 73 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
- 21. Claims 48-49, 51-54, 71-72 and 75-77 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
- 22. Claims 55-69, 78-92 would be allowable if rewritten or amended to overcome the above objection.
- 23. The following is a statement of reasons for the indication of allowable subject matter: the prior arts of record fail to anticipate or render obvious the following recited features: inserting, in time domain, the reference symbol wherein said reference symbol comprises a real part and an imaginary part which are being equal and formed by said amplitude modulated bit sequence as recited in all independent claims.

Conclusion

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1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Scheirer et al U.S. patent No 6,363,175 B1 teaches a spectral encoding of information.

Philips U.S. patent No 5,550,812 teaches a system for broadcasting and receiving digital data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard Primary Examiner Art Unit 2631

4/1/05

EMMANUEL BAYARD PRIMARY EXAMINER